

**AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions, and listings, of claims in the application.

1-10. (Canceled)

11. (Currently Amended) A dyeing device for dyeing a plastic lens, comprising:

a heating furnace comprising a frame section forming a space within the heating furnace and a cooling mechanism in a position corresponding to a portion of the lens within the space formed by the frame section; wherein the cooling mechanism is separated from the frame section;

a heating section provided within the frame section;

an openable insertion port for allowing insertion of the lens provided on or near a bottom surface of the frame section;

a lens-holding mechanism for holding the lens; and

a lens-moving mechanism for vertically moving the lens-holding mechanism to insert all or a part of the lens from the insertion port into an interior portion of the heating furnace, wherein the cooling mechanism is formed from a cooling pipe provided near the insertion port of the interior portion of the heating furnace.

12. (Canceled)

13. (Previously Presented) The dyeing device for dyeing a plastic lens of claim 11, wherein the lens-moving mechanism further comprises a device for controlling the insertion position of the lens into the interior portion of the furnace.

14. (Previously Presented) The dyeing device for dyeing a plastic lens of claim 11, further comprising a device for controlling a temperature distribution within the heating section so as to produce a half-dyed lens.

15. (Previously Presented) The dyeing device for dyeing a plastic lens of claim 11, further comprising a device for controlling the heating of the lens so as to produce a variation in coloration in the lens.

16. (Currently Amended) A dyeing device for dyeing a plastic lens, comprising:

a heating furnace comprising a frame section forming a space within the heating furnace;

a heating section provided within the frame section;

an openable insertion port for allowing insertion of the lens provided on or near a bottom surface of the frame section;

a lens-holding mechanism for holding the lens; and

a lens-moving mechanism for moving the lens-holding mechanism to insert all or a part of the lens from the insertion port into an interior portion of the heating furnace,

wherein the lens-moving mechanism is configured to move the lens in a vertical direction while the lens is in the heating section, and

wherein the heating furnace further comprises a cooling mechanism in a position corresponding to a portion of the lens within the frame section not requiring coloration, wherein wherein the cooling mechanism is formed from a cooling pipe provided near the insertion port of the interior portion of the heating furnace.

17. (Currently Amended) A dyeing device for dyeing a plastic lens, comprising:

a heating furnace comprising a frame section forming a space within the heating furnace;

a heating section provided within the frame section;

an openable insertion port for allowing insertion of the lens provided on or near a bottom surface of the frame section;

a lens-holding mechanism for holding the lens;

a lens-moving mechanism for moving the lens-holding mechanism to insert all or a part of the lens from the insertion port into an interior portion of the heating furnace; and

a device for setting a temperature distribution state within the heating furnace such that the temperature increases from the vicinity of the insertion port toward the inside of the frame section,

wherein the heating furnace further comprises a cooling mechanism in a position corresponding to a portion of the lens within the frame section not requiring coloration, wherein wherein the cooling mechanism is formed from a cooling pipe provided near the insertion port of the interior portion of the heating furnace.

18-19. (Canceled)